

Microfinance

"I went to the bank and proposed that they lend money to the poor people. The bankers almost fell over." Muhammad Yunus

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Why did the Traditional Development Banks Fail ?

- Informational Disadvantages

- ↳ adverse selection \Rightarrow ration credit or make a loss

- Inability to Enforce Repayment

- ↳ insufficient sanctions to ensure repayment

- ↳ political expediency

- Lack of Financial Viability

- ↳ interest rate restrictions

- ↳ easier to secure central bank funds than attract deposits

- Unequal access to lending persisted

- ↳ economics of scale

- ↳ collateral reduces the risk

- ↳ political influence/patronage

Institutional Approach to Policy

Must design institutions that can compete with informal money lenders

- Vertical formal–informal linkages: use moneylenders as agents
 - ↳ takes advantage of their information
 - ↳ potential for collusion amongst agents
 - ↳ perverse impacts under monopolistic competition
- Engage in related business (trade–credit interlinkage)
 - ↳ e.g. Philippines' National Agricultural Productivity Program (Ray, p. 573) — end users and input suppliers receive cheap credit if they extend credit (often “in kind”) to farmers
- Group lending and peer monitoring schemes
 - ↳ e.g. Grameen Bank

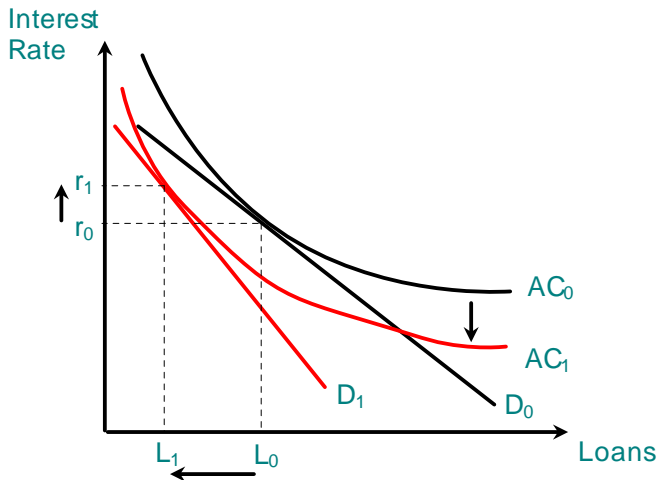


Figure: Potential Perverse Effects of using Moneylenders as Agents

The Beginnings of Microfinance

- Grameen Bank started by Mohammed Yunus (1976) with help from Bangladesh Bank
- Later helped by IFAD, Ford Foundation and several governments
- Use group lending and peer monitoring
- Programs now exist worldwide
 - ↪ well-established programs in Bangladesh, Bolivia and Indonesia
 - ↪ new programs in Mexico, China and India
 - ↪ villages along the Amazon
 - ↪ inner-city Los Angeles, Toronto and Halifax
- Over 70 million clients (grown at 40% per year since 1997)

Basic group lending mechanism

Grameen I ("classic")

- Groups of 5 formed voluntarily
 - ↳ encourages “assortative matching”
- No collateral required
- 2:2:1 staggering
 - ↳ individual loans made first to 2, then 2 more, then the fifth at 4-6 week intervals
 - ↳ cycle continues as long as loans are repaid
- Joint liability: if one member defaults, all members are denied subsequent loans
 - ↳ incentive for members to screen, monitor and enforce

- Frequent repayments:
 - ↳ weekly, in public (in front of "center" – e.g. the village)

- Progressive Lending
 - ↳ initial small loan, growing with each loan cycle as credit history builds
 - ↳ eventually large enough for house repairs, or sending child to university
 - ↳ eventually borrowers become shareholders

- Average nominal interest rate (2000) = 20%
 - ↳ compared to 120% from informal moneylenders

- Average default rate (2000) = 2%
 - ↳ compared to 60-70% for rural lending by other banks

Group Lending in Theory

- Success traditionally attributed to role of "joint liability"
- More recent analysis emphasizes other aspects
 - ↳ dynamic incentives
 - ↳ high frequency repayment schedule
 - ↳ 95% female borrowers
 - ↳ current movement towards individual lending (Grameen II)

Group Lending and Adverse Selection

Example: 2 member group

- One-period project requiring \$1 investment
- Bank's cost of \$1 loan = k
- Fraction q of borrowers are "safe": gross return = \underline{y}
- The remaining $1 - q$ are "risky":

$$\text{Gross return} = \begin{cases} \bar{y} & \text{with prob. } p \\ 0 & \text{with prob. } 1 - p \end{cases}$$

- Identical expected return: $p\bar{y} = \underline{y}$
- Borrowers know each others types, but lender doesn't
- Assortative matching \Rightarrow a fraction q of groups are (safe, safe)

- If both types of borrower are in the market, what is the break-even repayment, \hat{R}_b ?

↪ assume that \bar{y} is large enough that $\bar{y} > 2\hat{R}_b$

- Then the probability of repayment by a risky pair is

$$\begin{aligned} p^* &= 1 - (1 - p)^2 \\ &= 2p - p^2 > p \end{aligned}$$

since default occurs only if *both* members fail

⇒ break even repayment:

$$\hat{R}_b = \frac{k}{q + (1 - q)p^*}$$

- This must be less than the minimum repayment without group lending

$$R_b = \frac{k}{q + (1 - q)p}$$

Implications

- Group lending makes it possible to "implicitly" charge safe borrowers lower interest rates and keep them in the market
- Joint liability \Rightarrow incentive for "assortative matching"
- In this case risky borrowers can repay more often
 - \hookrightarrow risk is transferred from bank to risky borrowers
 - \hookrightarrow allows bank to lower interest rate and still break-even
 - \hookrightarrow safe types may be lured back into the market

Group Lending and Moral Hazard

Example

- Projects require \$1 investment per member
- Non-shirker generates output y for sure
- Shirker generates

$$\text{output} = \begin{cases} y & \text{with prob. } p \\ 0 & \text{with prob. } 1 - p \end{cases}$$

- Cost of providing effort = c
- Gross interest rate = R
- Cost of funds to lender = k

Individual contract

- Borrower's IC constraint in individual contract:

$$(y - R) - c \geq p(y - R)$$

⇒ lender's maximum achievable lending rate

$$R \leq R^* = y - \frac{c}{1 - p}$$

- if $R^* < k$, this loan will not be made, even if $y - R > c$

Group contract (2 members)

- Assumption: group members act to maximize expected group income
- ↳ any member that deviates can be "punished" by the others
- $y < 2k$: if only one is successful, this is insufficient to cover sum of borrowing costs
- Borrowers' IC constraint in group contract:

$$\begin{aligned}(2y - 2R) - 2c &\geq p^2(2y - 2R) \\ (y - R) - c &\geq p^2(y - R)\end{aligned}$$

⇒ lender's maximum achievable lending rate

$$R^{**} = y - \frac{c}{1 - p^2} > R^*$$

- If $R^{**} > k > R^*$, a shift to group lending allows this investment to go ahead

Implications

- Joint liability \Rightarrow incentive for members to impose sanctions on each other

\hookrightarrow induces borrowers to provide required effort

- Group lending relaxes IC constraint \Rightarrow more projects will be funded
- Idea can be extended to situations where internal group sanctions are costly

Problems with Traditional Group Lending

Mixed results across countries reflects differences in trade-off between benefits and costs

- Groups may be difficult/costly for borrowers to set up
- Attending group meetings can be costly in some cases; beneficial in others
- Transfers risk from bank to borrowers
- Beyond a certain lending scale, individual contracts may be preferred
- Social sanctions for default often seem too harsh and/or not credible
 - ↳ what if the defaulter has trouble through no fault of her own?
 - ↳ new borrowers in village often cover defaults of old

Beyond Group Lending

- Emerging view: joint liability is not the *only* key to success
 - ↳ shift toward individual lending for the "not so poor"
- Emphasis on role of dynamic incentives to induce repayment
 - ↳ i.e.. progressive lending
 - ↳ a key element of Grameen bank lending
- Grameen II proposal
 - ↳ "basic loan" (variable duration, seasonal variation in installments)
 - ↳ then "flexible loan" (easier terms, but small) if borrower gets in trouble
 - ↳ expulsion only if customer fails to repay this

Financial Viability Debate

- Continued debate over how heavily subsidized Grameen and other MFIs are

- ↳ researchers estimate “break even” lending rate = 32–45% (>20%)
- ↳ implicit subsidies include significant low interest loans from international organizations

- BUT

- ↳ very cost-effective way of targeting public resources at poor
- ↳ estimates do not account for social benefits
- ↳ microfinance institutions in other countries have not been able to target such poor households and still break even

Privatization of Microfinance ?

- Microfinance is presented as a market-based strategy for poverty reduction, but continues to be heavily subsidized
- Intended strategy: subsidies initially, then operate without them once scale economies and experience drive down costs
- Need to attract savings, issue bonds or obtain commercial funds
- In July 2002 Financiera Compartamos (ACCION) issued a 100 million peso bond
↳ but to get A+ rating from S&P, lending rates exceed 110%
- Should we worry about high rates if enough borrowers can pay them?
- To serve the poorest, subsidies may be essential